



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,724	12/15/2003	Ken A. Nishimura	10031375-1	3578
7590	01/19/2006		EXAMINER	
AGILENT TECHNOLOGIES, INC. Legal Department, DL 429 Intellectual Property Administration P.O. Box 7599 Loveland, CO 80537-0599			NGUYEN, HUNG	
			ART UNIT	PAPER NUMBER
			2851	
			DATE MAILED: 01/19/2006	

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/736,724 Examiner Hung Henry V. Nguyen	NISHIMURA ET AL. Art Unit 2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 08 November 2005.  
 2a) This action is FINAL.                  2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-25 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-25 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-4, 6-17, 19, 21-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Venkateswar (U.S.Pat. 5,721,622).

With respect to claims 11 and 22, 24-25, Venkateswar (figure 1) discloses a photolithography apparatus comprising all structures set forth in the instant claims such as: light modulation elements (12), a first set of the light modulations elements (for example 28) operable to photolithographic ally transfer a portion of an image onto a region of a substrate (10); and a second set for the light modulation elements (for example 26) operable to photolithographically

transfer the portion of the image onto the area of the substrate (see col.5, lines 31-57) and memory elements (13) in communication with respective ones of the light modulations elements, and the memory elements being configured to store data representing the portion of the image.

As to claims 12-13, Venkateswar further teaches the image is divided into image sections and image subsections wherein the portion of the image corresponds to one of the image subsection (see figures 2-3).

As to claims 14-16, Venkateswar teaches the light modulation elements are arranged in an array having rows and columns (see figures 4-6; see col.4, lines 1-11).

As to claim 17, Venkateswar discloses the light modulation elements being liquid crystal material (see col.3, lines 36).

As to claim 19, Venkateswar discloses that the light modulation elements comprise micromirrors (see col.5, lines 10-15).

As to claim 21, Venkateswar discloses third set of light modulation elements being operable to photolithography transfer the portion of the image onto the area of the substrate.

As to claim 23, Venkateswar discloses a laser light source (12) for illuminating the spatial light modulator.

As to claims 1-4, 6-10, the claimed method is seen to be inherent teachings in existence of the above apparatus.

3. Claims 1-17 and 19-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Sandstrom (U.S. Pat. 6,618,185).

With respect to claims 1-4, 6-17, 19-25, Sandstrom (figure 1) discloses a photolithography apparatus and corresponding method comprising all of the limitations of the instant claims such as: light modulation elements (30), a first set of the light modulations elements operable to photolithographic ally transfer a portion of an image onto a region of a substrate (60); and a second set and third set for the light modulation elements operable to photolithographic ally transfer the portion of the image onto the area of the substrate (see col.2, lines 60-67); memory elements (30) in communication with respective ones of the light modulations elements, and the memory elements being configured to store data representing the portion of the image and a laser light source (10) coupled to the spatial light modulation elements for illuminating the spatial light modulation elements and a stage operable to one of the spatial light modulation elements and the substrate relative to each other (see col.4, lines 8-24). Sandstrom teaches the image is divided into image sections and image subsections wherein the portion of the image corresponds to one of the image subsection (see figures 2-3) and the light modulation elements are arranged in an array having rows and columns (see figure 2). Furthermore, Sandstrom, discloses the light modulation elements being liquid crystal material (see col.1, lines 29) or the light modulation elements comprise micromirrors (see col.2, lines 20-21).

As to claims 5 and 20, Sandstrom teaches wherein the first set of the light modulation elements including a defective light modulation element, the second set of the light modulation elements corresponding to the defective light modulation element in the first set of light modulation element is not defective (see col. 4, lines 25-31).

As to claim 18, Sandstrom further discloses the light modulation elements having common electrode and pixel electrodes (see figure 8).

***Response to Arguments***

4. Applicant's arguments filed November 8, 2005 with respect to prior art rejections have been carefully considered but they are not persuasive. The applicant is reminded that the claimed subject matter to examination will be given their broadest reasonable interpretation consistent with the specification, and limitations appearing in the specification are not to be read into the claims. *In re Yamamoto*, 740 F. 2d 1569, 1571, 222 USPO 934, 936 (Fed.Cir. 1984).

With this in mind, the discussion herein will focus on how the terms and relationships thereof in the claims are met by the references. Response to any limitation that is not in the claims or any argument that is irrelevant to or does not relate to any specific claimed language will not be warranted.

Applicant argues that the limitation of "a first set of said light modulation elements *operable* to photolithographically transfer a portion of an image onto an area of a substrate, and a second set of said light modulation elements *operable* to photolithographically transfer the portion of the image onto the area of the substrate" has not been found to be taught in the cited references. The Examiner respectfully disagrees with the applicant. The cited references meet all of the limitations as claimed. Firstly, the Examiner is reminded that it has been held that recitation that an element is "*operable*" or "*capable*" performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138.

In view of the rejection under the reference of Venkateswar, Applicant argues that “applicants have not found in Venkateswar any teachings that, for any given image line, one of the four rows of mirrors transfers a microimage onto the image line, and another of the four rows of mirrors transfers the same microimage onto the image line”. Then, Applicant concludes that “it is submitted in view of the foregoing that Venkateswar fails to teach the aforementioned exemplary feature of claims 1-25.” (see remarks, page 3, lines 3-12). The Examiner respectfully disagrees with the applicant since the limitations on which the applicant may rely on (i.e., transfer the same microimage onto the image line”) are not stated in the claims. It is the claims that define the invention, and it is claims, not the specification that anticipated or unpatentable. *Constant v. Advanced Micro-Devices Inc.*, 7 USPQ2d 1064. As shown in figure 1, Venkateswar teaches a light modulation element (12) having a first set of light modulation elements (for example, see first row: 28, 36...44) wherein each pixel is either exposed or not (see col.4, lines 17-18) therefore the first set of the light modulation elements can be operable to transfer a portion of an image onto an area of a substrate (16). Furthermore, Venkateswar teaches a second set of light modulation elements (for example, see second row: 26, 34...42) operable to photolithographically transfer the portion of the image onto the area of the substrate. Therefore, Venkateswar meets all of the limitations of the claims, as recited. Accordingly, the rejection under the reference of Venkateswar is respectfully maintained, as set forth above.

Turning to prior art rejection under the reference of Sandstrom, the applicant agrees that Sandstrom discloses a first set and second sets of spatial light modulating elements can be used in respective first and second writing passes to perform respectively corresponding image transfers but Applicant argues that the second set of element during the second writing pass is

offset by a predetermined spatial distance from an image portion transferred by the first set of elements during the first writing pass, and the Applicant then concludes that Sandstrom does not disclose “a first set of said light modulation elements *operable* to photolithographically transfer a portion of an image onto an area of a substrate, and a second set of said light modulation elements *operable* to photolithographically transfer the portion of the image onto the area of the substrate”; The Examiner respectfully disagrees with the applicant since applicant’s argument is not correct. Sandstrom meets the claimed limitation. The applicant is directed to column 2, lines 57-67 of Sandstrom. Therein it is clearly disclosed that a second set of the light modulation elements operable to photolithographically transfer the portion of the image onto the area of the substrate (work piece). Sandstrom discloses that “providing a source for emitting electromagnetic radiation, illuminating by said radiation said SLM having a plurality of modulating elements (pixels), projecting in a first writing pass an image of said modulator on said work piece using a first set of pixels in said SLM, performing a pre-compensation for defective pixels in at least one subsequent writing pass in at least one prior writing pass, and projecting in at least a second writing pass said image of said modulator on said work piece using at least a second set of pixels in said SLM”. Accordingly, the rejection of claims 1-17 and 19-25 under the reference of Sandstrom is maintained. It is noted that applicant does not separately argue the distinct patentability of dependent claims, therefore the Examiner believes that the dependent claims are not additionally patentable over and above the patentability of rejected independent claims.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Henry V. Nguyen whose telephone number is 571-272-2124. The examiner can normally be reached on Monday-Friday (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hvn  
1/14/06



HENRY HUNG NGUYEN  
PRIMARY EXAMINER